



5.1 City of Hampton Profile

The following sections present a detailed assessment of critical hazards that affect the City. Understanding these hazards will assist the Peninsula region in its process of identifying specific risks and developing a mitigation strategy to address those risks.

5.1.1 Flooding – City of Hampton

The City of Hampton's geographic location makes it extremely susceptible to coastal flooding. Storms associated with coastal flooding include tropical cyclones and nor'easters. These types of events typically drop large amounts of rain and generate high winds that result in storm surge. Storm surge is the water that is pushed toward the shore by the persistent force of the winds of an approaching storm. Astronomical tides occur independently of climactic conditions. Depending on the tide level at the time of landfall, storm surge may be elevated due to high tides or spring high tides. Flash flooding and urban flooding are also a concern within the city limits.

As part of the NFIP, FEMA has created a Flood Insurance Study (FIS) and Flood Insurance Rate Maps (FIRMs) for the City of Hampton, dated July 16, 1987. The NCDC tracks the occurrence of flooding events for communities across the nation. The City of Hampton has developed surge elevations for its parcel data set. All of these data sources were utilized in developing this hazard identification and vulnerability assessment.

The FIRMs, which accompany this FIS, delineate the 100- and 500-year flood hazard boundaries for flooding sources identified in areas of growing development or areas predicted to have future development, at the time of the report. A detailed wave height analysis was developed in order to delineate the 100- and 500 year flood hazard boundaries for the city. The 100-year flood has a one percent chance of occurrence of being equaled or exceeded in any given year; a 500-year flood has a 0.02 percent annual chance of occurrence. This analysis resulted in a 100-year stillwater elevation of 8.5 feet for Hampton, and a maximum 100-year wave crest of 11 to 13 feet. The full FIS provides a detailed description of methods and assumptions. The significant flood events outlined in the FIS are provided below in Table 5.1.1a.

Table 5.1.1a -Significant Flood Events

City of Hampton Flood Insurance Study

Date	Storm	High Water Elevations
August 1933	Chesapeake - Potomac Hurricane	Max tide heights averaged 8 feet
April 1956	Nor'easter	Not provided
October 1957	Hurricane – Not named	Not provided
September 1960	Hurricane Donna	Not provided
March 1962	Nor'easter, Ash Wednesday Storm	Max tide heights averaged 6.8 feet

Source: FEMA 1987



The NCDC, operated by NOAA, keeps a record of significant weather related events and damage estimates for the entire country. Listed below are the most significant events that have affected the City of Hampton since the FIS was developed (1987); (Table 5.1.1b).

Table 5.1.1b - NCDC Significant Flood Events –City of Hampton

Date	Event	Precipitation	Comments
September 15 to 17, 1999	Hurricane Floyd	12-18 inches	<ul style="list-style-type: none">Numerous roads washed out due to floodingFlooding considered 500-year floodEnormous crop damage
October 17 to 18, 1999	Hurricane Irene	4-7 inches	<ul style="list-style-type: none">Numerous flooded roads and road closures
July 24, 2000	Flash Flood	Torrential Rain	<ul style="list-style-type: none">Up to 35 residences had to be evacuated due to high water
June 14, 2002	Flash Flood	Not provided	<ul style="list-style-type: none">Numerous reports of street floodingWater shooting out of manholes
August 28, 2002	Flash Flood	2 to 3 inches in 3 hours	<ul style="list-style-type: none">Caused road closures
September 3, 2003	Flash Flood	Not provided	<ul style="list-style-type: none">Many roads flooded
September 18, 2003	Hurricane Isabel	4-7 inches	<ul style="list-style-type: none">Severe FloodingTrees downPower Outage
August 30, 2004	Tropical Storm Gaston	Not provided	<ul style="list-style-type: none">Flooding occurred in the city

5.1.2 Hurricanes – City of Hampton

Virginia felt the effects of over 20 major hurricanes since the early 20th century. Most recently, the communities within the Peninsula area were damaged by Hurricanes Dennis and Floyd in September 1999 and Hurricane Isabel in September 2003.

Hurricane Dennis set the stage for its successor, Hurricane Floyd, by deeply saturating the soil throughout the Peninsula. An erratic Dennis lingered off the North Carolina coast for several days between August 31 and September 5, 1999, dumping 3.3 inches of precipitation at Norfolk Airport, with even higher totals inland. Shortly thereafter, on September 16, Hurricane Floyd moved through the Peninsula area dropping four to five inches of rain within 24 hours and generating winds in excess of 40 mph. Storm precipitation in Hampton totaled 7.5 inches, and throughout the Peninsula, trees and power lines were knocked down, roads flooded, and over 5,500 homes were left without power. The havoc produced by the two events in such short succession surely amplified their effects.

Hurricane Isabel made landfall on September 18, 2003 as a Category 2 hurricane near Drum Inlet, North Carolina.



Hurricane Isabel is considered to be one of the most significant tropical cyclones to hit this area since Hurricane Hazel (1954) and the Chesapeake-Potomac Hurricane of 1933. Isabel produced storm surges 6 to 8 feet above normal high tide levels and was directly responsible for 10 deaths in Virginia and indirectly responsible for 22 deaths. Isabel caused widespread wind and storm surge damage in eastern North Carolina and southeastern Virginia, currently estimated at \$925 million in Virginia. All of

Coastal flooding from Isabel at Buckroe Beach, Hampton

the above data was taken from the NOAA Tropical Cyclone Report for Hurricane Isabel (Beven and Cobb, 2004).

In Hampton, the Buckroe and Grandview areas were particularly hard hit by Isabel. In Grandview, estimates of at least \$4 million damage to older 1940s style homes and cottages were reported, with the majority of the older homes being significantly damaged or destroyed. (FEMA 2004) Isabel's storm surge exceeded the 1933 surge in some areas, and fell short in others. At King Street and Mercury Boulevard, the Isabel surge was at least two feet shy of the 1933 storm, but at Ft. Monroe, the storm surge in 2003 was at least 2.5 feet higher. At Fox Hill, Isabel brought an additional 12 inches of surge to the area. Forecasters at the National Hurricane Center in Miami attributes Isabel's wrath to the fact that the storm's right front quadrant lashed the Peninsula and the wind stayed out of the east for an extended period, resulting in water piling up in the extended reaches of many rivers and creeks. Much of the damage from felled trees in Isabel can be attributed to the immense precipitation experienced prior to September 2003; the summer of 2003 had nearly two times the total prior to the 1933 storm. (*Daily Press*, 8/23/03, *Daily Press* 9/29/03)

5.1.3 Tornadoes – City of Hampton

The City of Hampton has experienced four tornadoes over the period of 1979 to 2004 (Table 5.1.3), which have caused a variety of damage. The four tornadoes identified on the NCDC dataset consisted of one F0 and two F2s. The most significant tornado, an F2, occurred on

September 4, 1999, preceding Hurricane Dennis. This tornado caused extensive structural damage to a three block area. As a result, fifteen people were injured (six seriously) and three apartment complexes and an assisted living facility were condemned. Total damages were estimated at \$7 million. No crop damage was reported.

A tornado struck Newport News a little past 3 p.m. on August 6, 1993. A man on the James River Bridge saw three funnel clouds over the river. Two dissipated and the third touched down moving through the woods on the Newport News side of the river. The tornado tracked 12 miles through Newport News, Hampton and Langley Air Force Base. In Hampton, two people were injured, 85 homes were damaged, 8 condemned with damage costs near three-quarters of a million dollars. On Langley, the tornado damaged several F-15s parked at the end of a runway for an air show scheduled for the next day

Table 5.1.3 - Historic Tornadoes – City of Hampton

Date	Magnitude	Deaths	Injuries	Property Damage	Descriptions
September 5, 1979	F2	0	9	\$250,000	<ul style="list-style-type: none"> Unroofed a home and damaged 27 others (Watson 2004c) Spawned by Hurricane Davis (Watson 2004c)
August 6, 1993	Not reported	0	2	\$750,000	<ul style="list-style-type: none"> 85 homes damaged; 8 condemned F-15s at LAFB damaged
September 4, 1996	F0	0	1	\$1,000	<ul style="list-style-type: none"> Minor damage
September 4, 1999	F2	0	6	\$7.7 million	<ul style="list-style-type: none"> Extensive structural damage to 3 block area 3 apartment complexes and 1 assisted living complex condemned 2 additional apartment complexes partially condemned 460 persons forced to evacuate 800 vehicle damaged Occurred ahead of hurricane Dennis
August 30, 2004	Not reported	0	0	Not reported	<ul style="list-style-type: none"> Minor tornado from Gaston

5.1.4 Wildfire – City of Hampton

Many wildfires are caused through human acts, both intentional (i.e. arson) and accidental. They can also be started through natural occurrences, such as lightning strikes. Wildfire danger can vary greatly season to season and is often exacerbated by dry weather conditions. Because of wild fire risk, VDOF has provided new information on identifying high-risk fire areas. Their Fire Risk Assessment Map was designed to help communities determine areas with the greatest vulnerability to wildfire.

The proximity of the tree lines or brush to the highway or roadway is also included in the wildfire risk analysis to capture the human/wildfire causal relationship. Travel corridors increase the probability of human presence across a landscape, thereby increasing the probability of

wildfire ignition. As such, areas closer to roads are much more likely to attain a higher ignition probability. (NWUIFPP updated).

The Wildfire Risk Assessment Map in Appendix B, as well as the large-format Multi-Hazard Map for Hampton attached to this report, delineates the aerial extent of wildfire vulnerability within the City of Hampton, based on VDOF fire risk assessment data. Parameters used to establish these risk boundaries are land use, population density, slope, land cover and proximity to roads. The map shows that approximately seven percent of the city is located in the high wildfire risk zone. No fire incidences have been reported with the city limits by the VDOF for the time period of 1995-2003.

5.1.5 Vulnerability Assessment – City of Hampton

The PHMPC conducted a vulnerability analysis for each natural hazard that was identified as critical with medium to high hazard potential. These hazards include: flooding, hurricanes, tornados, and wildfire. This section describes the methodology used to perform the vulnerability analysis for each hazard and then lists the results of this analysis. The vulnerability assessment investigated the following:

- Number and value of at risk structures;
- Number of at risk critical facilities; and,
- Extent of at risk critical infrastructure.

Flooding – City of Hampton

The City GIS Office provided a digital parcel polygon layer containing attribute fields that included a FEMA flood hazard designation and improvement values. This database was queried to determine which parcels were within 100-year flood hazard boundaries. The improvement values of these parcels were then totaled.

From the vulnerability analysis it was determined that 11,120 parcels are designated as Zone AE, 348 parcels were designated as Zone VE, and 23 were designated as Zone A. All of these zones represent the one percent annual chance (100-year) flood hazard as defined by FEMA. There were a total of 50,252 parcels in the database. The analyses found that approximately 23 percent of these parcels are designated with 100-year flood hazard. The City assessor's database provided by the city included a general designation for each parcel, indicating "dwelling", "commercial", "other" or "no value". Table 5.1.5a provides a summary of the analysis.

Table 5.1.5a - Summary of Flood Analysis – City of Hampton

Parcel Designation	Number of Parcels	% of Total Land Area	Parcels in 100-yr Floodplain	Improvement Value
Dwelling	42,056	84	10,815	\$1,124,810,600
Commercial	1,977	4	391	\$2,067,112,700
Other (e.g., boathouse, garage)	538	1	285	\$20,001,300
No Value/Vacant	5,681	11	N/A	N/A
Total	50,252	100	11,491	\$3,211,924,600



FEMA developed a concept to highlight the impact that repetitively flooded structures have had on the NFIP. The term “repetitive loss,” as applied to the NFIP, refers to any property for which two or more flood insurance claims in excess of \$1,000 each in a 10-year period of time have been paid. In 1998, FEMA reported that the NFIP's 75,000 repetitive loss properties had already cost \$2.8 billion in flood insurance payments and numerous other flood prone properties continue to remain at high risk in the Nation's floodplains. While these properties make up only one percent of the flood insurance policies currently in force, they account for 30 percent of the country's flood insurance claim payments. A report on repetitive loss structures completed by the National Wildlife Federation found that 20 percent of these structures are listed as being outside of the 100-year floodplain (Conrad et al. 1998).

FEMA has identified 160 structures as repetitive loss structures in the City of Hampton. The structures are valued at over \$19.5 million, collectively. Losses span the time period from April 1978 through September 2003 (Hurricane Isabel). Total flood insurance payments for buildings and contents over that period are \$6.6 million, or 18 percent of the total payments made to all Hampton properties in that time. City planners have identified specific areas of the city that contain large numbers of repetitive losses; however, in order to protect the privacy of those policyholders, that information cannot be shared in this plan.

Hurricane – City of Hampton

Hazards U.S. – Multi Hazard (HAZUS^{®MH}) was utilized to perform a wind hazard analysis for the entire Peninsula region. HAZUS^{®MH} software is a multi-hazard loss estimation program that was developed under a cooperative agreement between the National Institute of Building Sciences and FEMA. The current version of HAZUS^{®MH} has the ability to calculate earthquake, wind, and flood hazards as well as potential economic losses associated with these hazards. The software is designed with the flexibility to perform loss estimations at three different levels. Level 1 utilizes all default parameters built into the software. Levels 2 and 3 require user-defined scenarios and building inventory data. For the purposes of this plan, a Level 1 wind analysis was performed to calculate the wind hazard for Hampton. The probabilistic scenario was used for this analysis. This scenario activates a database of many thousands of storm tracks and intensities, and generates hurricane hazards based on set return periods. These return periods define the statistical probability that a storm of a given size and intensity could occur within any year.

Table 5.1.5b lists the total dollar value of exposed structures for the City of Hampton. The default data set provided with the HAZUS^{®MH} software is based on the 2002 U.S. Census data. This analysis is based on the probability of occurrence and can generally be used to estimate potential damages from high winds despite development trends that may have impacted population since 2002.

Table 5.1.5b-Value of Structures Exposed to High Wind – City of Hampton

Occupancy Type	Total Value of Exposed Structures (in \$1,000)
Residential	\$7,243,284
Non-Residential	\$1,100,057
Total	\$8,343,341

Based on HAZUS^{®MH}.

The probabilistic analysis generated with the HAZUS^{®MH} software utilized the same building stock information listed in Table 5.1.5a. The probabilistic scenario generates hurricane hazards based on set return periods. These return periods define the statistical probability that a storm of a given size and intensity could occur within any year. The probabilistic method was used to generate loss estimations of storms with specific recurrence intervals: 10-, 20-, 50-, 100-, 200-, 500-, and 1000-year. Since residential structures comprised a significantly large percentage of the occupancy classification, these data are presented in Table 5.1.5c below.

Table 5.1.5c-Summary of Probabilistic Analysis – Residential Structures – City of Hampton

Return Period	Residential Building Damage – Number of Buildings			
	Minor	Moderate	Severe	Destruction
10-year	42	4	0	0
20-year	449	48	9	0
50-year	6,069	1,034	148	35
100-year	12,906	4,896	1,057	739
200-year	15,238	7,334	1,816	1,273
500-year	14,693	11,004	4,457	3,632
1000-year	10,263	12,075	8,424	8,798

A consistent problem with these data is evident here, and that is that NOAA, USACE and HAZUS-MH do not provide a clear relationship between return periods and categories of hurricanes.

Tornado – City of Hampton

Four tornado events were reported for the City of Hampton. The random nature of these events renders them difficult to predict; therefore, conducting a vulnerability analysis is difficult. The entire city has equal statistical probability of experiencing a tornado. Historic occurrences of tornados in the region show the severity of tornados typically range from F0 to F3 on the Fujita Scale, but the likelihood of a bigger tornadic event cannot be discounted.



The facilities and building stock that were identified as exposed under the hurricane hazards above are also exposed to tornado hazards. Tornadoes are random natural events that strike with little warning but are associated with thunderstorms and tropical weather such as hurricanes.

Wildfire - City of Hampton

The Wildfire Risk Assessment data, provided by the VDOF, was utilized to estimate the wildfire risk for the City of Hampton. The Wildfire Risk Map (Appendix B) shows that approximately seven percent of the city is in a high risk area. This data layer was overlaid with the city parcel mapping in order to estimate the value of at-risk structures. The VDOF also provided the number of wildfire incidences reported from 1995-2003.

According to the VDOF, zero incidences of wildfire were reported for the City of Hampton from 1995-2003. There are 456 parcels that intersect the high wildfire hazard zone. The parcels have a total improvement value of \$986,342,500.

Critical Facilities Analysis – City of Hampton

In order to assess the vulnerability of a community to natural hazards, the PHMPC conducted an inventory of the Peninsula area structures and critical facilities (Appendix E). Critical facilities are those facilities that warrant special attention in preparing for a disaster and/or facilities that are of vital importance to maintaining citizen life, health, and safety during and/or directly after a disaster event.

The inventory of critical facilities for the City of Hampton includes emergency response facilities such as police stations, fire departments, emergency medical service stations (EMS), public facilities including schools and local government buildings. The code and number provided in Table 5.1.5f identify these facilities on the all-hazard mapping provided in Appendix F. Those facilities that are geographically located within an identified hazard zone are listed in Tables 5.1.5d, 5.1.5e, and 5.1.5f.



Table 5.1.5d -Critical Facilities at Risk – 100-Year Floodplain

Name	Code	Number
Station 5	FR	10
Fire Administration	FR	12
Fire Training Center	FR	13
Police Headquarters	PO	4
Police Field Office	PO	6
Gloria Dei Lutheran School	SC	9
Syms Middle School	SC	34
Burbank Elementary School	SC	42
Cooper Elementary School	SC	1
Tyler Elementary School	SC	38
Barron Elementary School	SC	44
Spratley Middle School	SC	32
Mary Peake – Y.H. Thomas Center	SC	20
Tarrant Elementary School	SC	35
Wythe Elementary School	SC	40

Source: AMEC

Critical Facility Key Code, see Appendix E

Table 5.1.5e-Critical Facilities at Risk –Surge Zone Hurricane Category 4

Name	Code	Number
Station 9	FR	3
Station 3	FR	8
Sentara Careplex	HO	3
Kecoughtan Court	PO	8
Briarfield	PO	9
New Horizon Regional Education Center	SC	23
Hampton High School	SC	11
Robert E Lee Elementary School	SC	29
New Mount Olive Christian Academy	SC	24
Lindsay Middle School	SC	17
Bassette Elementary School	SC	51
Emmanuel Grace Baptist Church	SC	4
Bradford Hall	SC	53
Wythe Elementary School	SC	40

Source: AMEC

Critical Facility Key Code, see Appendix E

Table 5.1.5f-Critical Facilities at Risk - High Wildfire Hazard Zone

Name	Code	Number
Thomas Nelson Community College	SC	36
New Horizon Regional Education Center	SC	23

Source: AMEC

Critical Facility Key Code, see Appendix E



5.1.6 Capability Assessment – City of Hampton

As an additional tool to assist with the examination of the hazards identified and to evaluate the community's ability to plan, develop, and implement hazard mitigation activities, the planning team assessed Hampton's existing mitigation capabilities. This assessment is designed to highlight both the codified, regulatory tools available to the community to assist with natural hazard mitigation as well as other community assets that may help facilitate the planning and implementation of natural hazard mitigation over time. The following Capability Assessment Matrix was used as a basis for the City of Hampton's mitigation plan.

Table 5.1.6 - Capability Matrix – City of Hampton

	City of Hampton
Comprehensive Plan	Yes, 12/89
Land Use Plan	Yes, part of Comp. Plan
Subdivision Ordinance	Yes
Zoning Ordinance	Yes
Floodplain Management Ordinance	Yes
-Effective Flood Insurance Rate Map Date	7-3-95
-Substantial Damage Language	Yes
-Certified Floodplain Manager	No
-Number of Floodprone Buildings	11,491
-Number of NFIP policies	9,792 (85%) as of 6/04
-Maintain Elevation Certificates	Yes
-Number of Repetitive Losses	160
CRS Rating	none
Stormwater Program	Yes
Building Code Version	VUSBC (IBC 2003)
Full-time Building Official	Yes
- Conduct "As-built" Inspections	Yes
- BCEGS Rating	2
Emergency Operations Plan	Yes
Hazard Mitigation Plan	Pending
Warning Systems in Place	Yes
-Storm Ready Certified	Yes
-Weather Radio Reception	Yes
-Outdoor Warning Sirens	No
-Emergency Notification (R-911)	Yes
-other (e.g., cable override)	Yes – cable override
GIS system	Yes
-Hazard Data	Yes
-Building footprints	Yes



	City of Hampton
-Tied to Assessor data	Yes
-Land Use designations	Yes
Structural Protection Projects	Yes
Property Owner Protection Projects	Yes
Critical Facilities Protected	Not all facilities fully protected.
Natural Resources Inventory	No
Cultural Resources Inventory	Yes, partial inventories
Erosion Control Procedures	Yes, by State law
Sediment Control Procedures	Yes, by State law
Public Information Program/Outlet	Yes, Emerg Mgmt & Public Works & CERT
Environmental Education Program	Yes, Public Works

Form of Governance

Hampton has a Council – Manager form of government. The Hampton City Council is composed of seven elected members, including an elected Mayor. The Council selects the Vice Mayor after each election. Elections are held on the first Tuesday in May. Council members are elected to four-year terms in staggered elections in even years. The Council appoints a City Manager who administers day-to-day city services and directs city agencies.

Guiding Community Documents

The City of Hampton has a range of guidance documents and plans for each of their departments. These include a comprehensive plan, 15 neighborhood/small area plans, capital improvement plans, and emergency management plans. The City uses building codes, zoning ordinances, subdivision ordinances, and various planning strategies to address how and where development occurs. One essential way the municipality guides its future is through policies laid out in the Comprehensive Plan.

Comprehensive Plan 2010

The Code of Virginia requires all cities and counties in the state to have a comprehensive plan and to review it every five years to determine if revisions are necessary. The City of Hampton's *Comprehensive Plan 2010* was adopted in 1989 and is the responsibility of the Department of Planning. The document features the following:

- The plan presents long-range intentions regarding the direction and nature of future development, assesses current conditions and incorporates citizen desires into long-range public policy.
- Comprised of six elements that focus on aspects of future development: Land Use, Transportation, Community Facilities, Environment, Housing, and Urban Design.
- Environmental element focuses on Chesapeake Bay water quality, balancing environmental restraints and development needs, stormwater management, protecting and enhancing water access, and the need for inventories of significant natural resources.
- Plans for continued growth and development and urban design in designated growth/redevelopment areas, including:



- Coliseum Central
 - Downtown Hampton
 - Buckroe Beach
 - King Street Corridor
- Plans for necessary transportation enhancements and improvements to service projected growth
- Plans for operation and expansion of public facilities to accommodate expected growth in the City, including bikeways, playgrounds, and pools.
- The City is currently working to adopt a new ten year plan, *the City of Hampton Community Plan*. This plan will be adopted in the Fall of 2005.

Zoning & Development Standards

- Identifies existing federal and state regulations for wetland, floodplain, and RPA/RMA protection.
- The document outlines required standards for new development and redevelopment based on use and zoning designation.

The City of Hampton has adopted the minimum requirements of the NFIP by designating the Flood Zone District as a Special Public Interest District in Zoning Ordinance §17.3-31. The community has 160 repetitive losses through the NFIP, 15 of which were constructed after the community's flood hazard areas were mapped (post-FIRM). Structures in A Zones must be constructed at or above the Base Flood Elevation, and structures in V-Zones must have their lowest horizontal structural member elevated to or above the base flood elevation, which includes an additional three feet for wave height. The Department of Codes Compliance enforced requirements for "substantially damaged" homes after Hurricane Isabel, but the process was exceedingly difficult and some difficult decisions had to be made. The City's Building Permit application includes a notation regarding the map panel and zone designation, and a space for the Finished Floor Elevation. Permit applications and parcel information are all available online. The parcel information includes flood hazard area designation.

A Site Plan Review Committee for new development is made up of representatives from Public Works, Division of Fire and Rescue, Police Division, Planning Department, Codes and Compliance, and any other department that the Director of Public Works deems necessary to review proposed plans. During the review of new site plans, recommendations concerning the plan may be made and any such suggestions shall be reported to the City Manager when the plan is submitted for review. The committee is tasked with the responsibility of reviewing the plan to ensure its compliance with the City's building, structure, and safety codes. The Police Division is tasked with ensuring that Crime Prevention through Environmental Design (CPTED) is achieved. This is accomplished by ensuring appropriate lighting and landscaping design, while minimizing design barriers that may result in unsafe or unlawful activities. The Office of Emergency Management is not involved in the Site Plan Review Committee.



Stormwater Program and Fees

The City's stormwater fee is a result of the Federal Clean Water Act of 1987, which mandated that cities of 100,000 or more persons reduce pollution before it reaches the Chesapeake Bay. Hampton established the stormwater fee because no Federal or state dollars were provided to implement water quality measures in accordance with the Federal mandate.

Monies from the stormwater fee are used to fund many programs related to water quality including environmental education, street sweeping, capital improvements to the system, drainage maintenance, administration, review of permits, inspection, and monitoring activities.

Public Education

Among the readily available public outreach mechanisms for the City of Hampton, the City's website (<http://www.hampton.gov>) provides residents with pertinent information, provides an on-line complaint form, property information tool, and answers numerous Frequently Asked Questions (FAQs). The City also posts most of its guiding documents, including the Comprehensive Plan on this site. The City provides special training to property owners via the Codes Academy and the City's Neighborhood College Leadership Institute. Emergency Preparedness information is also disseminated through the City PIO's eNews, free e-mail briefs about what's happening in Hampton, and the City's local cable channel, Channel 47.

The City of Hampton is the first locality in Virginia to establish a centralized 3-1-1 customer call center that offers citizens round-the-clock access to city services and information. Residents within the city limits dial 3-1-1 and reach the voice of call center staff. Residents with cell phones may also access 3-1-1. Those citizens outside of the city limits may access the customer call center by calling 727-8311. Customer Advocates (call-takers) help with everything from reporting a missed trash collection to potholes to answering questions about the city budget or inquiries about a community center's hours.

The City's Department of Public Works has many different types of educational materials available for Hampton residents, businesses, teachers, youth, and adult groups. Materials may include coloring books, posters, promotional magnets, environmental tip sheets, and guides to all environmental services in Hampton. The Hampton Watershed Restoration Project offers annual waterway clean-ups, Chesapeake Bay friendly seminars, Adopt-a Stream cleanup, storm drain marking, environmental ambassador efforts and public education activities.

Emergency Preparedness

Emergency Alert System (EAS) is a national civil emergency alert system that uses message relays between member radio and television stations to inform the public about immediate threats to national security, life, and property. EAS is used for severe weather warnings and can also be employed to disseminate Amber Alerts for missing children. The enhancement is an initiative of Governor Warner's Secure Virginia Panel designed to improve statewide preparedness, response, and recovery capabilities for emergencies and disasters. Governor Mark R. Warner announced June 5, 2004, that Virginia will enhance its public warning capabilities



with a new satellite-based system that can rapidly transmit EAS messages throughout the Commonwealth.

Storm Ready – As of February 2005, the National Weather Service has certified only five Virginia communities as “Storm Ready”, including Hampton, Newport News, Danville, Fairfax County and Loudoun County. Storm Ready is a nationwide community preparedness program that uses a grassroots approach to help communities develop plans to handle severe weather. The program encourages communities to take a new, proactive approach to improving local hazardous weather operations by providing emergency managers with clear-cut guidelines on how to improve their hazardous weather operations. To be officially Storm Ready, a community must:

- Establish a 24-hour warning point and emergency operations center;
- Have more than one way to receive severe weather warnings and forecasts and to alert the public;
- Create a system that monitors weather conditions locally;
- Promote the importance of public readiness through community seminars; and,
- Develop a formal hazardous weather plan, which includes training severe weather spotters and holding emergency exercises.

Hampton Citizen Corps – The Hampton Citizen Corps is part of the Virginia Corps that creates opportunities for individuals to volunteer to help communities prepare for and respond to emergencies by bringing together local leaders, citizen volunteers and organizations. Hampton’s Citizen Corps includes three core programs: Neighborhood Watch, Volunteers in Police Service (VIPS), and Community Emergency Response Team (CERT). Medical Reserve Corps (MRC) is under development.

CERT, which is the core program most relevant to hazard mitigation, helps communities respond to disasters during the first 72 hours following an event when flooded roads, disrupted communications, and emergency demand outweigh local emergency services. The purpose of CERT training is to provide private citizens with basic skills to handle virtually all of their own needs and then to respond to their community’s needs in the aftermath of a disaster.

Other Mitigation Activities

Prior to Hurricane Isabel, placement of the geotube and beach nourishment at the north end of Buckroe Beach was the largest flood mitigation project financed by the City. Since 2001, the City has purchased eight inland structures in Buckroe with plans to install a dry stormwater pond in the area. One fire station remains in the floodplain (Fox Hill Fire Station, engine bay only), and at least one substation is located in the floodplain in the Fox Hill area.

Since Hurricane Isabel (September 2003), approximately 12 scattered residential structures have been elevated to at least the Base Flood Elevation with homeowner financing and Increased Cost of Compliance (ICC) funds. The City’s Codes Compliance Department issued over 50 letters to



homeowners providing eligibility for the NFIP's ICC program for insured structures. Two post-Hurricane Isabel FEMA HMGP project requests were submitted to elevate a total of 27 homes in Buckroe, Grandview, Chesapeake Avenue and the Coliseum Central areas. One grant has been approved, and the other denied. At the time of this report, the project is in the procurement phase. Several other HMGP projects have been proposed and rejected regarding relocating the school maintenance facility at Windmill Point, beachfront restoration at Buckroe Beach, seawall reconstruction at Chesapeake Avenue, and generator-wiring of critical facilities.

The City of Hampton plans to expand and improve Newmarket Creek Park. Newmarket Creek watershed has a significant history of flooding. The improved park will include additional designated open space in the floodplain, and additional canoe launches and docking areas in an effort to improve recreational access to local waterways.

The City's Household Chemical Collection Program is a drop-off program sponsored by the City of Hampton and the Virginia Peninsula's Public Service Authority (VPPSA) to serve residents in the City of Hampton for the disposal of household chemicals. This program helps remove aging hazardous chemicals from residences throughout Hampton, including areas that could be affected by flooding.